



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0187; Project Identifier AD-2020-01664-E]

RIN 2120-AA64

Airworthiness Directives; CFM International, S.A. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain CFM International, S.A. (CFM) LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26CJ, LEAP-1A26E1, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A model turbofan engines. This proposed AD was prompted by a report of a manufacturing quality escape found during an inspection of a high-pressure turbine (HPT) case. This proposed AD would require the removal from service of the affected HPT case. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact CFM International, S.A., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: (877) 432-3272; email: aviation.fleetsupport@ge.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0187; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Chris McGuire, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington MA 01803; phone: (781) 238-7120; fax: (781) 238-7199; email: Chris.McGuire@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0187; Project Identifier AD-2020-01664-E” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Chris McGuire, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA received a report of a manufacturing quality escape that identified certain HPT cases did not meet their approved type design. CFM determined the nonconforming parts could lead to over-temperature of the HPT mid-seal and uncontained rotor failure. A review of several x-rays of the bleed ports of the HPT case showed 148 parts with nonconforming indications, 8 of which were significant enough to impact the life of the HPT case. This condition, if not addressed, could result in failure of the HPT case, uncontained rotor release, damage to the engine, and damage to the airplane.

FAA’s Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed CFM Service Bulletin (SB) LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020. This SB specifies procedures for replacing the affected HPT cases. This service information is reasonably available because the

interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require removing the affected HPT cases from service and replacing the HPT case with a part eligible for installation.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 8 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Remove and replace the HPT case	1 work-hour x \$85 per hour = \$85	\$217,600	\$217,685	\$1,741,480

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national

government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

CFM International, S.A.: Docket No. FAA-2021-0187; Project Identifier AD-2020-01664-E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to CFM International, S.A. (CFM) LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26CJ, LEAP-1A26E1, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A model turbofan engines, with a high-pressure turbine (HPT) case, part number (P/N)

2668M94G01, that contains a stage 7 port, P/N 2614M30P01, with a port casting serial number (S/N) listed in Table 1 in Planning Information, Paragraph 3.A., of CFM Service Bulletin (SB) LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020.

(d) Subject

Joint Aircraft System Component (JASC) Code of America Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by a report of a manufacturing quality escape found during inspection of an HPT case. The FAA is issuing this AD to prevent failure of the HPT case. The unsafe condition, if not addressed, could result in failure of the HPT case, uncontained rotor release, damage to the engine, and damage to the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Before the HPT case exceeds the cycles since new limit in Table 1 in Planning Information, Paragraph 3.A., of CFM SB LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020, or during the next piece part exposure, whichever occurs first after the effective date of this AD, remove the affected HPT case from service and replace with a part eligible for installation.

(h) Definitions

For the purpose of this AD:

(1) A part eligible for installation is an HPT case, P/N 2668M94G01, that contains a stage 7 port, P/N 2614M30P01, with an S/N that is not listed in Table 1 in Planning Information, Paragraph 3.A., of CFM SB LEAP-1A-72-00-0421-01A-930A-D, Issue 001, dated October 22, 2020.

(2) Piece-part exposure is when the HPT case is removed from the engine and fully disassembled.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14

CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Chris McGuire, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7120; fax: (781) 238-7199; email: Chris.McGuire@faa.gov.

(2) For service information identified in this AD, contact CFM International, S.A., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: (877) 432-3272; email: aviation.fleetsupport@ge.com. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

Issued on March 12, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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